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**Fair Market Value
Assessment of Belize
Electricity Limited**
A Report for the Government of Belize



NERA
Economic Consulting

Not to be circulated more widely

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Executive Summary

On June 20th, 2011 the Government of Belize (“the Government”) assumed control over Belize Electricity Limited (“BEL”) under the Electricity (Amendment) Act, of 2011. The Government has commissioned NERA Economic Consulting (“NERA”) to carry out a fair market value (FMV) assessment of BEL as of 20 June 2011 (“Valuation Date”), at the time of the acquisition of the company by the Government.

We have conducted the assessment in accordance with accounting principles and economic theory. We have based the valuation on data and information provided to us by BEL, such as audited financial statements and recent Business Plans of BEL.

When necessary we use our own predictions so as to reflect information available on the Valuation Date, but not on the date of publication of the data. Our fair market valuation (FMV) and equity valuation reflect assumptions, methods and forecasts a rational investor would adopt at the valuation date.

We create a financial model using a bottom-up analysis of BEL’s cash flows. We use the model to predict BEL’s cash flows from 2011 to 2015 and to calculate the company’s continuing value at the end of the explicit forecast period in 2015.

Table 1 summarizes the FMV and equity value calculations. The **FMV is BZ\$ 198,494** thousands as of the Valuation Date. **The Equity value is BZ\$ 106,618** thousands as of the valuation date. **The value per share is BZ\$ 1.54** as of the Valuation Date.

Table 1
Valuation of Belize Electricity Limited

Item	Valuation Date	Unit	(BZ\$ 000)
Discounted CFs (2011-2015)	(1 Jan 2011)	000\$	18,857
Discounted Continuing Value	(1 Jan 2011)	000\$	170,287
FMV (Jan 2011)	(1 Jan 2011)	000\$	189,144
Adjustment Factor			1.05
FMV (20 Jun 2011)	(20 Jun 2011)	000\$	198,494
Excess Market Securities	(20 Jun 2011)	000\$	0
Enterprise Value	(20 Jun 2011)	000\$	198,494
Long Term Liabilities	(20 Jun 2011)	000\$	-91,877
Equity Value	(20 Jun 2011)	000\$	106,618
Number of Shares	(20 Jun 2011)	000	69,023
Value per Share	(20 Jun 2011)	\$	1.54

Source: NERA analysis

- **Discounted CFs (2011-2015)** is the value of BEL’s cash flows discounted to 1 January 2011. We calculate the cash flows over the explicit forecast period from 2011 to 2015. We predict the cash flows in our financial model that is base on bottom-up modelling of key cash flow drivers. The cash flows are adjusted for value of delivery (VAD) under recovery in the 2009-2011 period (see below).
- **Discounted Continuing Value** is the value of BEL at the end of the explicit forecast period (Dec-2015) discounted to its value on 1 January 2011. The value at the end of the period is calculated in accordance with standard valuation principles¹; see Section 0 of this report for details.
- **FMV** is the fair market value of the company on 1 January 2011. The FMV is the sum of the discounted cash flows and the discounted continuing value of the company. See Section 10 of this report for details.
- The **Adjustment Factor** makes an adjustment to the FMV to account for the fact that the Valuation Date is about 6 months after the point in time to which we discount the FMV. The adjustment factor is calculated in accordance with standard valuations principles; see Section 3.4 of this report for details.
- **Excess Market Securities** represent the cash and short term investments that are not necessary in running the day to day operations of BEL. The short term cash and short term investments stood at \$4.7 million at the Valuation Date. This amount is required in BEL’s day to day operations. Hence, we set the Excess Market Securities to zero. See Section 11.1 for details.
- **Enterprise Value** is the sum of the FMV and the Excess Market Securities as of the Valuation Date.
- **Long Term Liabilities** is the sum of long term debt and debentures as disclosed in BEL’s consolidated financial statements on the 30th of June 2009. We can use this figure in the valuation although it was published ten days after the Valuation Date because no debt or debentures were scheduled to mature between the two dates, i.e. the Long Term Liabilities did not change between the two dates.
- **The Equity value** is the value of the company belonging to shareholders. The equity value is the total enterprise value less the value of its long term liabilities.
- **Number of Shares** is the number of shares of common stock outstanding on the Valuation Date as disclosed in BEL (2010)² and BEL (2011)³.
- **The Value per Share** is calculated as the total equity value divided by the number of shares.

¹ For details see Koller *et al.* “Valuation: Measuring and Managing the Value of Companies.” 4th Edition.

² BEL (2010): Annual Report p.32

³ BEL (2011): Management Report For Month Ended June 30, 2011; as implied in earnings per share calculation

Our financial model predicts that the allowed rate of return led to over recovery in 2008 and under recovery from 2009 to 2011 of the value added of delivery (VAD)⁴. The VAD for the 2008 calendar year based on rates set in PUC (2007; 2008) decisions is based on an overestimated regulated asset value (RAV) and led to over recovery in the 2008 calendar year. The VAD has not been adjusted since the PUC (2008) decision and does not reflect increase in the RAV due to capital expenditures from 2009 to 2011 and hence led to under recovery in that period. The total balance for the period is negative \$27 million at the end of 2011.

PUC (2008)⁵ says:” *The VAD is considered to be “Almost But not Quite Revenue Capped” Some component/s of VAD could experience an incentive/penalty treatment.*” We assume in our Base case scenario that PUC allows BEL to fully recover the under recovered balance, i.e. the balance is credited to the rate of stabilization account (RSA).

⁴ VAD is one of components constituting the allowed electricity rate; for details see PUC(2008): Amended First Schedule to the Public Utilities Commission Final Decision for Belize Electricity Limited

⁵ Public Utilities Commission (2008): Amended First Schedule to the Public Utilities Commission Final Decision for Belize Electricity Limited

1. Introduction

On June 20th, 2011 the Government of Belize assumed control over Belize Electricity Limited (“BEL”). An interim board was appointed by the Minister for electricity to take control of BEL. The board will manage and regulate the affairs of the company until a new Board of Directors is appointed pursuant to the Company’s Articles of Association.

The Government of Belize has commissioned NERA Economic Consulting (“NERA”) to carry out a fair market value (FMV) assessment of BEL as of 20 June 2011 (“Valuation Date”), at the time of the acquisition of the company by the Government of Belize. Our fair market value opinion expressed in this report will be used to assess the financial settlement with the previous shareholders. The authors of this report will testify on this report, and/or provide a rebuttal report on other opposing witness testimony.

We have relied upon data and information provided to us by BEL, such as audited financial statements and recent Business Plans of Belize Electricity Limited. We conducted our FMV assessment in accordance with valuation principles generally accepted in the economic and financial literature.

The remainder of this report is structured as follows:

- Section 2 provides the relevant background to our assessment of BEL’s FMV;
- Section 3 sets out our valuation methodology;
- Section 4 sets out our tariff forecasts;
- Section 5 sets out our revenue forecasts;
- Section 6 sets out our cost forecast
- Section 7 set out our free cash flow forecasts;
- Section 8 shows our calculation of the discount factor;
- Section 9 shows our forecast of BEL’s continuing value ; and
- Sections 10 and 11 set out our assessment of the fair market value of BEL.

Our report qualifications and assumptions are set out in Appendix C.

2. Background

Belize Electricity Limited (“BEL”) was established in Belize in 1950 as Belize Electricity Board. The company was privatized and became Belize Electricity Limited in 1992. In 2011 BEL is the primary distributor of electricity in Belize serving approximately 77,000 customers.

On June 20th, 2011 the Government of Belize assumed control over BEL under the Electricity (Amendment) Act, of 2011. The Act sets out circumstances under which the Minister for Electricity may in the public interest assume control over an electricity supplier to ensure uninterrupted energy delivery to customers. In accordance with the Act the former owners of the electricity supplier will receive reasonable compensation.

This report does not provide a view on the legality of the assumption of control under the Electricity (Amended) Act, of 2011. Instead, we assume that the conditions necessary for the assumption of control over the supplier were met and the takeover by the government was legal.

This report sets out our fair market value assessment of BEL as of the Valuation Date from the perspective of a rational investor using general accepted valuation principles, and based on the assumption that the rational investor would likely adopt.

3. Valuation Methodology

3.1. Introduction

We derive the valuation for BEL using the discounted cash flow (DCF) method. This is the standard valuation methodology used in the financial literature.⁶

Consistent with the DCF method, we value BEL's operations by discounting the company's post-tax free cash flow from operations at the post-tax weighted average cost of capital (WACC). This methodology requires the forecasting of free cash flows to debt and equity holders, and calculation of their present value at the time when the government assumed the control over the company.

Our calculation of free cash flow is in conformity with standard valuation theory. The WACC used in our analysis is based on our analysis (See Section 8) and the regulatory decision of the Public Utilities Commission (PUC) and is consistent with the calculation of free cash flows on a nominal and post-tax basis.

To derive the enterprise value (value of debt and equity), we add to the value from operations based on DCF, the value of excess marketable securities and the value of financial investments as of Valuation Date 20 June 2011.

3.2. General Inputs

Table 3.1 sets out the general inputs used in the valuation model.

Table 3.1
General Valuation Inputs

Latest year end	31/12/2010
Valuation date	20/06/2011
End of detailed forecast period	31/12/2015
Currency	BZ\$
Units	1,000

The currency in our valuation report is in Belize dollar and all cash flows are modelled in nominal terms (i.e. outturn prices). Unless otherwise stated, all currency amounts shown in this report as \$, are in Belize Dollars.

3.3. The Discounted Cash Flow Model

The DCF model we use in the valuation is based on NERA predicted financial inputs. We do not base our model on BEL's Business Plan as it does not factor in the post-financial crisis recession and the subsequent slow recovery.

⁶ For details of the methodology, see Koller *et al.* "Valuation: Measuring and Managing the Value of Companies." 4th Edition, Chapter 5.

We use a bottom-up approach to model individual inputs of our model as a rational investor would do. We use information a rational investor would have as of the Valuation Date. The NERA Adjusted Business Plan financial inputs and their calculation are described in Sections 4 to 7 of this report.

3.4. Mid-year Adjustment Factor Calculation

The Valuation Date is 20 June 2011. However, we discount cash flows to 31 December 2010, the latest year end; we therefore make an adjustment to account for the fact that the Valuation Date is about 6 months after this point in time. We calculate the mid-year adjustment factor in accordance to general accepted valuation principles⁷ as follows:

$$\text{Adjustment} = \left(\frac{1}{1 + WACC} \right)^{\frac{X}{365}}$$

Where X is equal to 172 and is equal to the number of days between the latest year end (31 December 2010) and the Valuation Date (20 June 2011).

⁷ Koller, T., Goedhart, M., Wessels, D. (2005): Valuation: Measuring and Managing the Value of Companies, *John Wiley & Sons, Inc.*

4. Tariff Forecast for BEL

The Public Utilities Commission (PUC) sets electricity prices so that the electricity distributing utilities are profitable while consumer prices remain low: “*Rates and Tariffs such that the Utility is viable and consumers pay the lowest reasonable rates for electricity services*”⁸

The tariff is composed of five components:

1. **Cost of Wholesale Power (CWP)** is the average price of electricity generation and acquisition. The CWP is a full pass through to customers, i.e. BEL always fully recovers CWP from customers.
2. **Value Added of Delivery (VAD)** is the average price (including capital investment) of electricity delivery to the customer. Some components of VAD are incentive based, i.e. the utility can make profit by increasing the efficiency of its electricity delivery.
3. **Rate of Stabilization Account Recoveries (RSA Recoveries)** are an extra charge passed onto customers to recover costs that BEL did not recover in previous periods. The RSA recovery consists of two components:
 - In an attempt to provide stable end-user prices during regulatory period fluctuations in the CWP during the regulatory period are not reflected in the end-user prices. Instead the cost under-recovery (over-recovery) due to CWP increase (decrease) is recorded in the **Cost of Power Rate Stabilization Account (CPRSA)** and recovered in the following regulatory period.
 - Cost of the network rehabilitation after a “force majeure” event may be too high to be recovered in one year. Unrecovered costs are recorded in the **Force Majeure Cost Rate Stabilization Account (FMCRSA)** and recovered over the following regulatory periods.
4. **Corrections** to tariffs may be applied should the utility become unviable or should costs be different than previously forecast.
5. **Incentives and Penalties** are applied in areas where costs and performance can be improved.

4.1. BEL’s 2011-2015 Business Plan

Table 4.1 shows a summary of customer tariffs based on BEL’s Business Plan over the period 2010-2015. We have calculated the tariffs using methodology set out in PUC (2008)⁹. It is our understanding that this methodology would be used to determine BEL’s allowed tariffs in the 2011-2015 period if the government had not had to assume control over it.

⁸ Public Utilities Commission (2008): Amended First Schedule to the Public Utilities Commission Final Decision for Belize Electricity Limited p.3

⁹ Public Utilities Commission (2008): Amended First Schedule to the Public Utilities Commission Final Decision for Belize Electricity Limited

Table 4.1
Tariff Forecasts based on BEL's Business Plan 2011-2015

	2010	2011	2012	2013	2014	2015
Customer Tariff excl. RSA (\$/kWh)	0.447	0.447	0.444	0.451	0.460	0.458
Customer Tariff incl. RSA (\$/kWh)	0.441	0.444	0.412	0.419	0.428	0.427
Difference (%)	-1.3	-0.7	-7.2	-7.1	-6.9	-6.9

Source: BEL's 2010 Annual report, BEL's Monthly Financial Statement (Jun-2011); BEL's 2011-2015 Business Plan; NERA analysis

The end-user tariff is decreased by the RSA charge that reimburses BEL's customers for previously too high electricity prices. We set the RSA charge so as to fully compensate the customers by 2015, i.e. the RSA balance is zero in 2015. The RSA recovery charge on average constitutes 5.7 per cent of the customer tariff.

4.2. NERA Adjusted Tariffs

We use a bottom up modelling approach to predict the annual tariffs BEL will be allowed to charge its customers in the 2012-2015 period. We forecast the individual tariff components and then sum them to obtain the predicted tariff. Our forecasting methodology of the tariff components is set out in the following sub-sections.

4.2.1. Cost of Wholesale Power

We use BEL's prediction of total sales and total costs of delivery to model the CWP. We divide the total cost of delivery in a year by the total sales in that year to obtain the unit cost of wholesale power (\$/kWh) in that year.

We assume that the post-financial crisis recession and subsequent slow recovery had no impact on the unit cost of wholesale power. Differences in NERA and BEL Business Plan estimates of total CWP are caused by differences in sales forecasts. Unlike BEL's, NERA's forecast explicitly factors in the impact of the financial crisis on the electricity sales and the total CWP. Table 4.2 shows a summary of our prediction of both total and unit CWP.

Table 4.2
NERA CWP Forecasts

	Unit	2009	2010	2011	2012	2013	2014	2015
Unit CWP	\$/kWh	0.312	0.312	0.312	0.269	0.271	0.279	0.279
Unit CWP (Change)	%		0.0	0.0	-13.8	0.9	2.9	0.0
Total CWP	\$M	130	133	133	119	125	134	139
Total CWP (Change)	%		2.1	0.0	-10.4	4.9	7.0	4.0

Source: NERA analysis

4.2.2. Value Added of Delivery

We model the VAD using a bottom-up approach. We first model components of the VAD and then based on these calculate the VAD the Public Utilities Commission (PUC) would allow BEL to charge its customers.

PUC (2008)¹⁰ bases the VAD on four components: operating expenditure (opex), Depreciation, Return earned by the licensee from tariffs levied on customers and taxes. The VAD in a calendar year is calculated in Equation 1:

$$\text{Equation 1} \quad VAD_t = OPEX_t + D_{CS} + TAR_t + TL_t$$

Where:

- OPEX is Operating expenditure in year “t”
- D_{CS} is depreciation in year “t”
- TAR_t is Return earned by the licensee from tariffs levied on customers in year “t”
- TL_t are taxes on regulated income in year “t”

We model all four components to take into account the post-financial crisis recession and subsequent sluggish recovery.

- **Opex** is modelled assuming that that BEL’s opex as a fraction of sales remains intact by the financial crisis. To calculate the opex in a year, we multiply opex as a fraction of sales (\$/kWh) calculated from BEL’s Business Plan by NERA predicted sales.
- **Depreciation** is modelled based on NERA Adjusted Business Plan capital expenditure (capex); see Section 7.3
- **Return earned by the licensee from tariffs levied on customers** is calculated as a 10% return on NERA predicted Regulated asset value (RAV).
- **Tax on regulated income** is modelled based on NERA Adjusted Business Plan revenues and tariffs as described in Section 7.4.

Table 4.3 summarizes our prediction of VAD and compares them to VAD based on BEL’s Business Plan 2011-2015.

Table 4.3
NERA VAD Forecasts

	Unit	2010	2011	2012	2013	2014	2015
NERA	\$/kWh	0.166	0.165	0.175	0.180	0.181	0.179
BEL Biz. Plan based VAD	\$/kWh	0.165	0.152	0.162	0.166	0.167	0.165
Difference	%	0.7	7.7	7.4	7.5	7.7	7.8

Source: NERA analysis; NERA analysis of BEL 2011-2015 Business Plan

¹⁰ Public Utilities Commission (2008): Amended First Schedule to the Public Utilities Commission Final Decision for Belize Electricity Limited

4.2.3. RSA

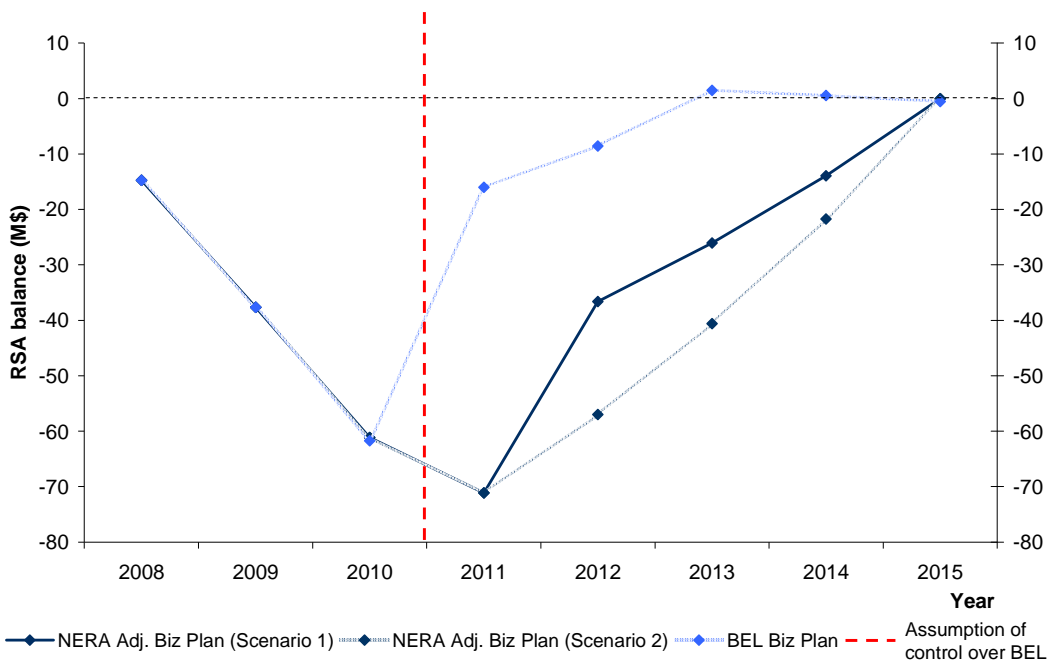
We calculate the RSA balance from 2008 to 2010 and predict it from 2011 to 2015. We assume that BEL settles the RSA balance by the end of the prediction period (2015), i.e. the RSA balance is assumed to be zero in 2015.

Figure 4.1 shows the predicted RSA balance between 2008 and 2015. Our calculation start diverging from BEL’s in 2010 as ours is based on actual numbers rather than predictions, we factor in the impact of the global crisis and we adopt realistic assumptions about BEL’s court proceedings.

We estimate the RSA balance to be \$M 67 negative when the government assumed control over BEL (Jun-2011) and predict further deterioration to ~\$M 73 at the end of 2011. We provide two possible scenarios from 2011 onwards:

1. NERA Scenario 1 assumes that BEL will be allowed to recover the difference between the regulated VAD for 2009-2011 and the actual (NERA calculated) VAD for the same period.
2. NERA Scenario 2 assumes that BEL will not be allowed to recover the difference between the regulated and actual VAD. I.e. in the second scenario the amount owed by BEL to the customers is *not* decreased by this amount.

Figure 4.1
RSA Account Balance was ~ M\$ 65 Negative when the Government Assumed Control over BEL



Source: NERA analysis; BEL 2011-2015 Business Plan

4.3. Summary

We use a bottom-up approach to model the electricity tariff BEL is allowed to charge its customers. We modelled the tariff for calendar years. But, based on the annual tariffs we could calculate fiscal year tariffs and/or revenue neutral tariffs for the regulatory period.

Table 4.4 shows the NERA calculated tariffs for the 2010-2015 period under RSA Scenario 1. The tariffs before the RSA correction are higher in the 2012-2015 period than in the 2010-2011 period. The RSA correction is set so as to fully repay the RSA balance by 2015.

The tariffs are set in accordance with PUC's methodology so as for the utility to be financially viable over the 2011-2015 period provided it is efficiently run. We also assume that the CWP costs are on average correctly forecast. We hence predict that the tariffs will not need to be adjusted and we set the annual correction to zero. Table 4.4 sets out NERA calculated tariffs we use in the base case scenario.

Table 4.4
NERA Electricity Tariff (Scenario 1)

	Unit	2010	2011	2012	2013	2014	2015
Cost of Wholesale Price (CWP)	\$/kWh	0.312	0.312	0.269	0.271	0.279	0.279
VAD - NERA calculated	\$/kWh	0.135	0.135	0.176	0.180	0.181	0.180
Subtotal (Revenue - True Tariff)	\$/kWh	0.447	0.447	0.444	0.451	0.460	0.459
CPRSA - Scenario 1	\$/kWh	0.080	0.040	-0.029	-0.029	-0.029	-0.029
Annual Correction (AC)	\$/kWh	-0.086	-0.043				
Customer Tariff (MER)	\$/kWh	0.441	0.444	0.415	0.422	0.431	0.430

Source: NERA analysis; NERA analysis of BEL 2011-2015 Business Plan;

5. Revenue Forecasts for BEL

We forecast BEL's revenues, which form the basis for our forecast of free cash flows, under two approaches:

1. Our first approach is to base the revenues forecasts on BEL's 2011-2015 Business Plan, which has been prepared and approved by BEL's previous owners. We calculate missing financial indicators that are necessary for the valuation, but otherwise do not adjust the Business Plan.
2. Our second approach, as set out in Section 5.2, is to forecast revenues on the basis of a time trend analysis using actual historical data on BEL's financial indicators.

5.1. BEL's 2011-2015 Business Plan

Table 5.1 shows a summary of BEL's Business Plan forecast (annual percentage growth rates) of revenues over the period 2010-2015. It is our understanding that these forecast growth rates have been prepared and approved by the previous management. We note that the Business Plan has been prepared at the end of 2010 and presented to BEL's board in November 2010, i.e. around seven months prior to the Valuation Date (20 June 2011).

Table 5.1
BEL's 2011-2015 Business Plan Growth Rates

Key Financial Indicators	Unit	2010	2011	2012	2013	2014	2015
Revenues (y-o-y change)	%	4.0	5.9	6.4	4.0	4.0	4.0
Revenues	\$M	194	205	219	227	236	246
Other revenue (y-o-y change)	%	20.4	4.9	2.0	1.4	1.1	1.1
Other revenue	\$M	6	6	6	6	6	6

Source: BEL's Business Plan 2011-2015; File: "2011-15 Five Year Business Plan (FINAL Board Meeting 10 Nov 2010).xls"

Table 5.2 shows that BEL's Business Plan 2010 and 2011 revenue forecasts are significantly higher than the actual 2010 revenues and 2011 revenues forecast based on more recent information available at the Valuation Date. The original Business Plan overestimates the revenues, because it does not fully factor in the impact of the financial crisis, global recession and sluggish economic recovery.

Table 5.2
BEL's Business Plan 2011-2015 Forecast Vs. 2010 Actuals and Jun-2011 Updated Forecasts

	Unit	Biz Plan 2010	Actuals 2010	Difference (%) 2010	Biz Plan 2011	Forecast Update 2011	Difference (%) 2011
Revenues	\$M	194	191	-1.81	205	190	-7.27
Other revenue	\$M	6	6	-0.44	6	6	6.05
Power cost	\$M	135	133	-1.81	120	133	10.90
Opex	\$M	27	29	6.83	26	26	2.43

Source: BEL's 2010 Annual report, BEL's Monthly Financial Statement (Jun-2011); BEL's 2011-2015 Business Plan

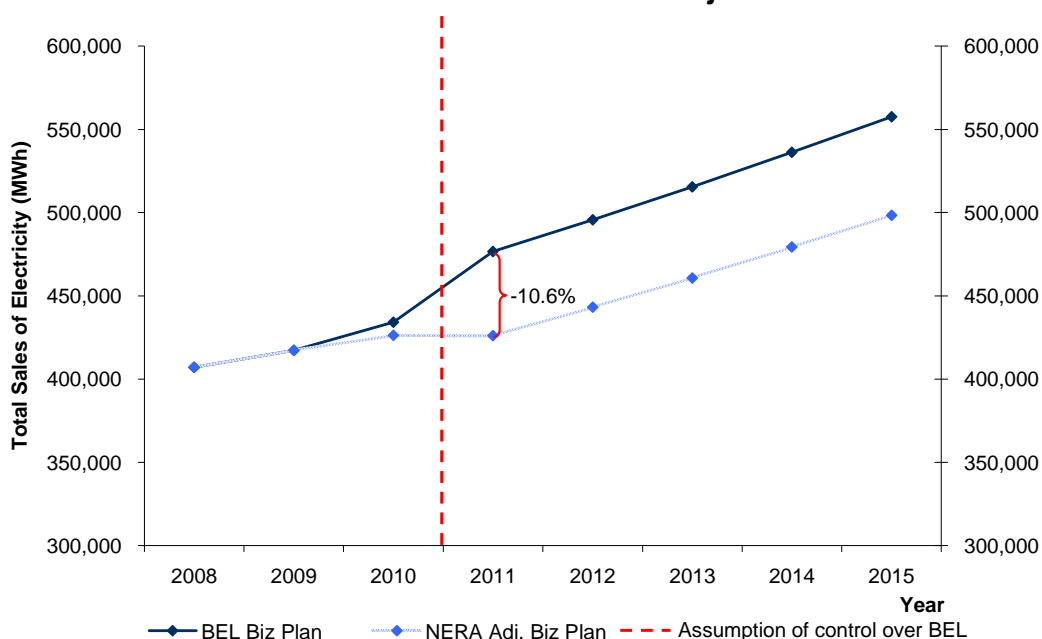
5.2. NERA's Adjusted Business Plan

We adjust BEL's 2011 - 2015 Business Plan to take into account the financial crisis, post-financial crisis recession and subsequent sluggish recovery, which was apparent at the Valuation Date, but not fully reflected in BEL's original Business Plan growth rates. We follow a 4-step process to estimate the revenues from electricity:

1. We estimate the "shock" the financial crisis and recession had on the original revenue growth forecast; we estimate the size of the shock by the difference between the Business Plan's growth forecast and the actual growth rate at the time of the Valuation Date (see Table 5.2 column "Difference").
2. We assume that the recession has a one off impact on the business and does not affect sales growth rates beyond 2012. We use the sales growth rate assumed in BEL's original Business Plan to project the sales growth from 2011 onwards.
3. We model the tariff the Public Utilities Commission (PUC) would allow in each year.
4. We calculate the revenues based on the predicted growth and NERA modelled tariffs.

Figure 5.1 compares the NERA and BEL Business Plans. The financial crisis lowered the total sales of electricity by estimated 10.6%. We assume that the economic recovery will begin in 2012 and adopt BEL's sales growth forecast from the point on. This may be an optimistic assessment leading to estimates of BEL's earnings and a fair market value towards the upper end of plausible estimates.

Figure 5.1
Sales Forecast: BEL’s Biz Plan VS. NERA Adjusted Business Plan



Source: NERA analysis; BEL’s 2010 Annual report, BEL’s Monthly Financial Statement (Jun-2011); BEL’s 2011-2015 Business Plan

Table 5.3 shows the NERA estimates of revenue tariffs BEL will be allowed to charge its customers per kWh of energy in the forecast period. We calculate the tariffs following Belize regulator’s (PUC) methodology as we describe in Section 4.2.

Table 5.3
NERA Electricity Tariff

	Unit	2010	2011	2012	2013	2014	2015
Cost of Wholesale Price (CWP)	\$/kWh	0.312	0.312	0.269	0.271	0.279	0.279
VAD - NERA calculated	\$/kWh	0.135	0.135	0.175	0.180	0.181	0.179
Subtotal (Revenue - True Tariff)	\$/kWh	0.447	0.447	0.444	0.451	0.460	0.458
CPRSA - Scenario 1	\$/kWh	0.080	0.040	-0.032	-0.032	-0.032	-0.032
Annual Correction (AC)	\$/kWh	-0.086	-0.043				
Customer Tariff (MER)	\$/kWh	0.441	0.444	0.412	0.419	0.428	0.427

Source: NERA analysis; NERA analysis of BEL 2011-2015 Business Plan;

Table 5.4 shows the revenues and revenue year-on-year growth in 2010, 2011¹¹ and the forecast period. The revenues in the forecast period are calculated as a multiple of total sales (in kWh) and electricity tariff per kWh.

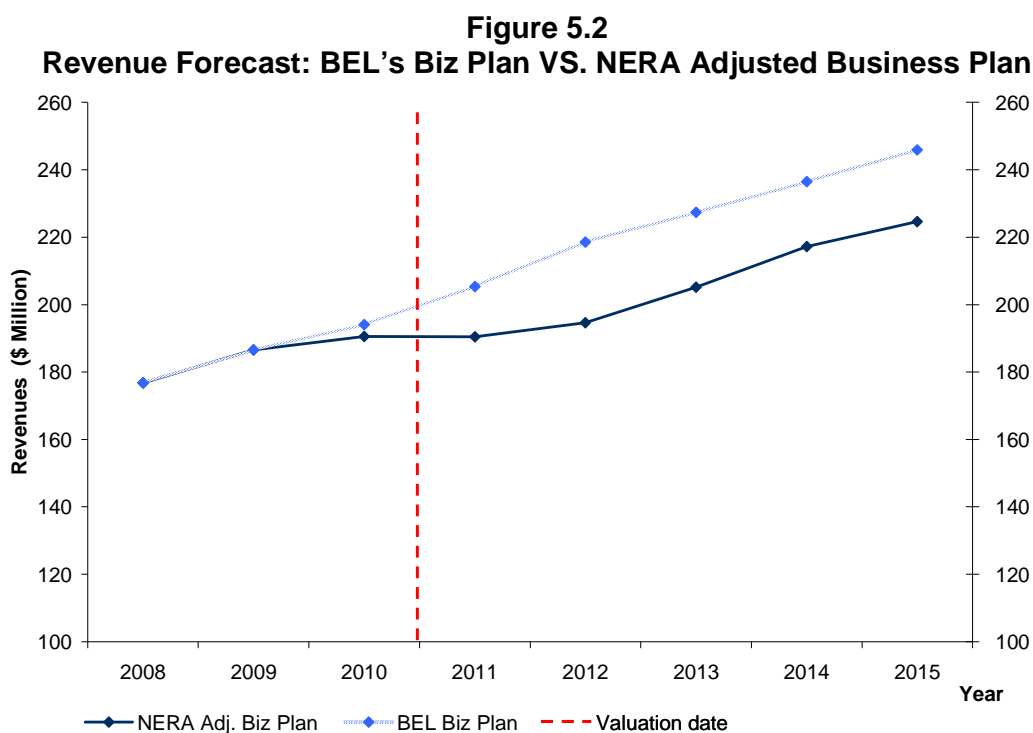
¹¹ We do not forecast revenues in 2011 as “BEL (2011): June Monthly Financial Statement” provides an accurate forecast based on mid-year data.

Table 5.4
NERA Adjusted Business Plan Growth Rates

	Unit	2010	2011	2012	2013	2014	2015
Revenues (y-o-y change)	%	2.1	0.0	3.4	5.5	6.1	3.7
Revenues	\$M	191	190	197	208	220	229
Other revenue (y-o-y change)	%	19.9	11.7	2.0	1.4	1.1	1.1
Other revenues	\$M	6	6	7	7	7	7

Source: BEL Business Plan 2011-2015, BEL 2010 Annual Report, BEL Jun-2011 Monthly Financial Statement and NERA analysis;

Figure 5.2 compares NERA Adjusted Business Plan and BEL Business Plan revenues. Unlike in the case of total sales we observe a divergence between the NERA Adjusted Business Plan forecasts and the BEL Business Plan in 2012. The two plans grow on a similar rate from 2012 on. The divergence in 2012 and subsequent convergence of the revenues is caused by BEL first overestimating and then underestimating the tariffs.



Source: NERA analysis; BEL's 2010 Annual report, BEL's Monthly Financial Statement (Jun-2011); BEL's 2011-2015 Business Plan

5.3. Summary

In summary, our analysis shows the following:

- BEL's original Business Plan does not fully account for the post-financial crisis recession and subsequent slow recovery. The Business Plan tends to overestimate BEL's revenues as of Valuation Date 20 June 2011.
- Our analysis (NERA Adj. Biz Plan) shows revenue forecasts below the Business Plan projection. On average, over the four year forecast period (from 2012 to 2015), the

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original Business Plan forecasts revenues around 7.7% higher than the NERA Adjusted Business Plan.

- The NERA Adjusted Business Plan takes the then ongoing recession in the developed world and slowing recovery in the developing world into account and produce consistent forecasts.
- The cumulative average growth rate (CAGR) over the forecast period 2012-2015 varies from 4.6% for the BEL Business Plan to 4.2%, for the NERA Adjusted Business Plan.
- The revenues in the NERA Business Plan are depressed during the post-crisis 2010/2011 years, but grow on average faster than the original BEL Business Plan assumes from 2013.

In forming our assessment of BEL's fair market value (FMV), we rely on the NERA Adjusted Business Plan revenues forecasts.

6. Cost Forecasts for BEL

We forecast BEL’s total costs over the 2011-2015 period based on NERA analysis and BEL’s latest Business Plan.

6.1. BEL’s 2011-2015 Business Plan Cost Forecasts

Table 6.1 shows BEL’s Business Plan cost forecasts over the period 2011-2015. We do not report individual cost components as the power costs are fully passed through onto customers and as such do not influence the company valuation.

Table 6.1
BEL’s Business Plan: Costs of Wholesale Power

	Unit	2010	2011	2012	2013	2014	2015
BEL Biz Plan	(M\$)	135	120	124	129	135	140
<i>BEL Biz Plan - growth</i>	(%)	4.0	-11.5	3.8	4.0	4.0	4.0

Source: BEL Business Plan 2011-2015 and NERA analysis.

6.2. NERA Adjusted Business Plan

We assume that the post-financial crisis recession and subsequent slow recovery has limited or no impacts on the costs of wholesale power (CWP) as a fraction of revenues, i.e. unit costs per kWh remain unchanged. The total CWP in the NERA Adjusted Business Plan is calculated as the per kWh¹² unit CWP in a given year times the number of kWh sold in that year. In accordance with PUC’s guidelines we assume that the costs in the forecast period are fully passed onto customers.

Table 6.2 gives the NERA prediction of the total and per kWh unit CWP for the forecast period 2012-2015. The cost drops in 2012 as the regulated per kWh unit CWP in 2011 is significantly above the predicted per kWh unit CWP in 2012 (0.312 \$/kWh in 2011 as opposed to 0.269 \$/kWh in 2012). The per kWh unit CWP increases from 0.269 in 2012 to 0.279 in 2015. The total CWP increases at a faster pace than the unit CWP as it also increases with sales growth.

¹² Kilowatt hour (kWh)

Table 6.2
NERA’s Adjusted Business Plan: Costs of Wholesale Power

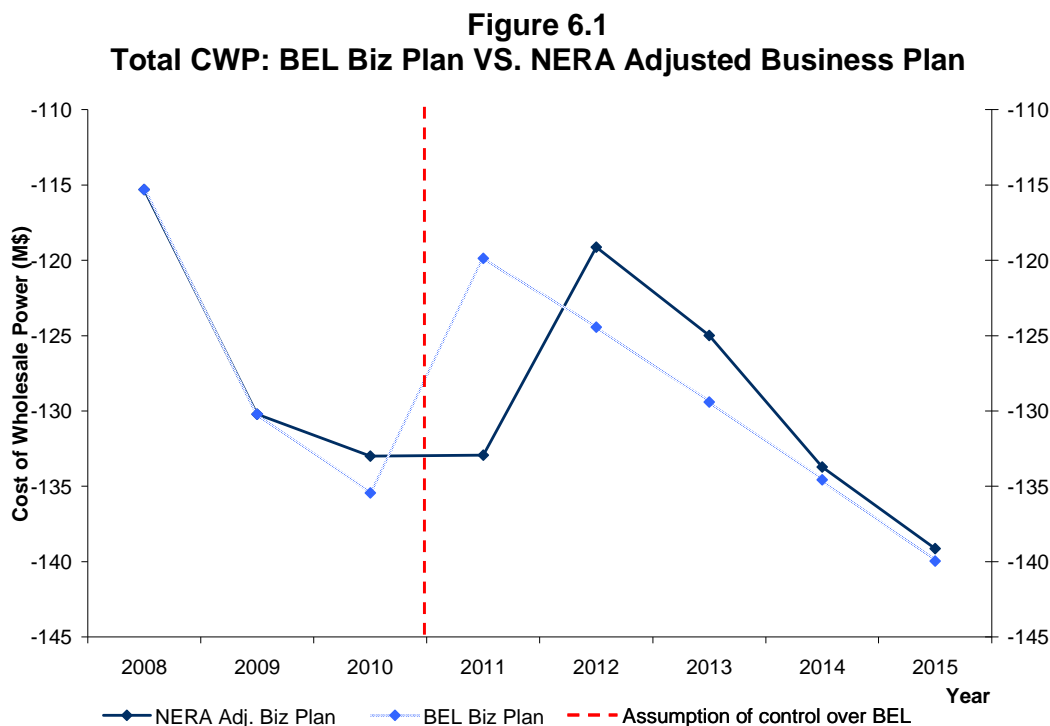
	Unit	2009	2010	2011	2012	2013	2014	2015
Unit CWP	\$/kWh	0.312	0.312	0.312	0.269	0.271	0.279	0.279
Unit CWP (Change)	%		0.0	0.0	-13.8	0.9	2.9	0.0
Total CWP	\$M	130	133	133	119	125	134	139
Total CWP (Change)	%		2.1	0.0	-10.4	4.9	7.0	4.0

Source: BEL Business Plan 2011-2015 and NERA analysis.

6.3. Summary

The CWP is a full pass through to customers and the utility does not make a profit or loss on them. The CWP does not influence company valuation. We assume that the post-financial crisis recession and subsequent slow recovery does not influence per kWh unit CWP. We use per kWh unit CWP from BEL’s Business Plan to calculate the total CWP based on NERA growth forecast.

Figure 6.1 shows the total CWP forecast under the NERA Adjusted Business Plan and BEL’s Business Plan. Note that the forecasts diverge from 2010, for which we use actuals while the BEL Business Plan uses forecasts. The two predictions converge towards the end of the prediction period.



Source: NERA analysis; BEL’s 2010 Annual report, BEL’s Monthly Financial Statement (Jun-2011); BEL’s 2011-2015 Business Plan

7. Free Cash Flow Forecast

7.1. Approach

In this section we set out our calculation of BEL’s free cash flow over the forecast period 2011-2015. Table 7.1 shows our calculation of free cash flow consistent with general finance theory.

Table 7.1
Free Cash Flow Calculation

Operation	Variable
	Revenues
Minus	Costs (COGS, SGA & Other)
Minus	Depreciation
=	EBIT
Minus	Taxes on Revenues
=	<i>NOPLAT</i>
Plus	Depreciation
=	<i>Gross Cash Flow</i>
Plus/Minus	Change in Working Capital
Minus	Capital Expenditures
=	<i>Free Cash Flow</i>

Free cash flows form the basis of our valuation of BEL’s operations. We discount free cash flows using the weighted average cost of capital (WACC).

7.2. Revenues and Costs

In Section 4 and 6, we have set out our methodology for forecasting revenues and costs. In our FMV assessment, we value BEL’s operations under our two scenarios:

1. BEL’s original Business Plan;
2. NERA Adjusted Business Plan;

The first scenario is based on BEL’s Business Plan costs, the latter later is based on our own projections of revenues and costs based on financial bottom-up modelling.

7.3. Capital Expenditure and Depreciation

7.3.1. BEL’s Business Plan

Table 7.2 shows BEL’s Business Plan forecast of annual capital expenditure (capex) and annual depreciation. It is our understanding that these capital expenditures were approved by the previous board of BEL.

Table 7.2
BEL's Business Plan: Capex and Depreciation

	Unit	2010	2011	2012	2013	2014	2015
Capex (BEL Biz Plan)	M\$	45	51	46	27	27	38
<i>BEL Biz Plan - growth</i>	%	4.7	13.2	-10.6	-41.7	0.9	38.9
Depreciation (BEL Biz Plan)	M\$	16	18	20	21	22	23
<i>BEL Biz Plan - growth</i>	%	10.1	10.7	10.2	8.7	5.1	2.7

Source: BEL Business Plan 2011-2015 and NERA analysis.

7.3.2. NERA Adjusted Business Plan

The level of capital expenditure is likely to be driven by the size of the network. The level of capex relative to the size of the network will remain largely intact by economic conditions. We assume that the capex per unit of electricity sold (\$/kWh) computed from BEL's Business Plan is applicable in the context of the NERA Adjusted Business Plan. We calculate the capex in a year as the multiple of the NERA predicted sales and BEL's assumed capex per unit of electricity sold.

The NERA modelled capex is below the BEL business plan, we adjust the depreciation accordingly. We model depreciation of the newly acquired assets assuming that they have the average asset life (25.7 years).

Table 7.3 summarizes the NERA Adjusted Business Plan predictions of capex and depreciation. The 2010 and 2011 values are taken from BEL's Jun-2011 Monthly Financial Statement, values from 2012 onwards are NERA predictions.

Table 7.3
Capex and Depreciation Forecast (BZ\$ '000)

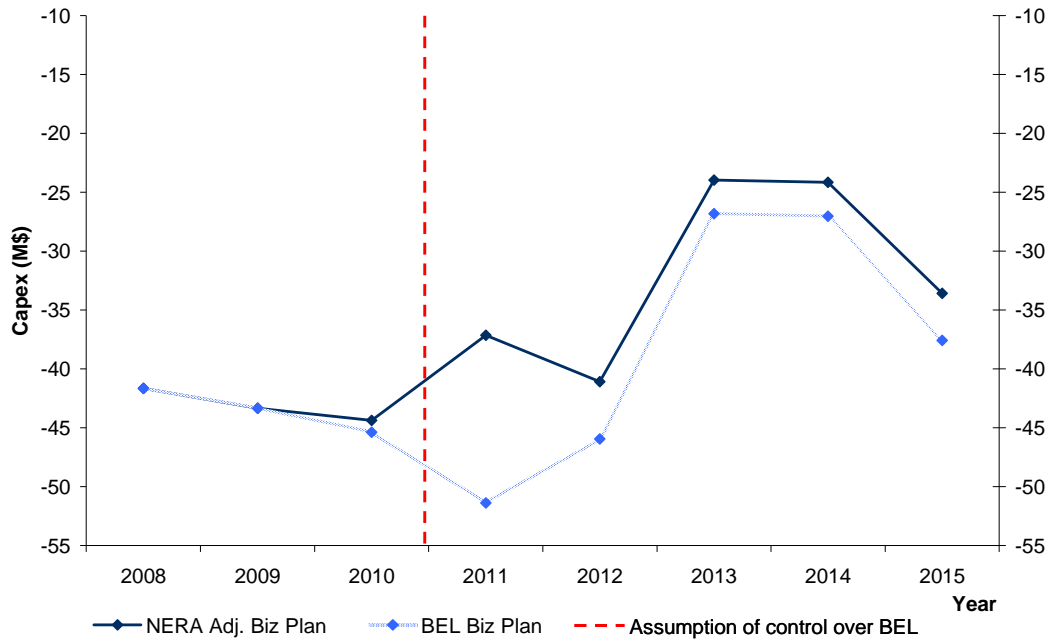
	Unit	2010	2011	2012	2013	2014	2015
Capex (NERA Adj. Biz Plan)	M\$	44	37	41	24	24	34
<i>BEL Biz Plan - growth</i>	%	2.4	-16.3	10.6	-41.7	0.9	38.9
Depreciation (NERA Adj. Biz Plan)	M\$	16	18	18	20	21	22
<i>BEL Biz Plan - growth</i>	%	9.9	9.4	4.9	8.6	6.3	5.0

Source: BEL Business Plan 2011-2015, BEL 2010 Annual Report, BEL Jun-2011 Monthly Financial Statement and NERA analysis;

7.3.3. Summary of capital expenditure and depreciation

Figure 7.1 summarizes the capex under the BEL Business Plan and the NERA Adjusted Business Plan. The capex in 2011 is significantly below the level predicted in the initial BEL Business Plan. Once the economy recovers from the post-financial crisis recession we predict that the capex will have similar dynamics as in BEL's Business Plan. Hence the capex estimates closely co-move from 2013 onwards.

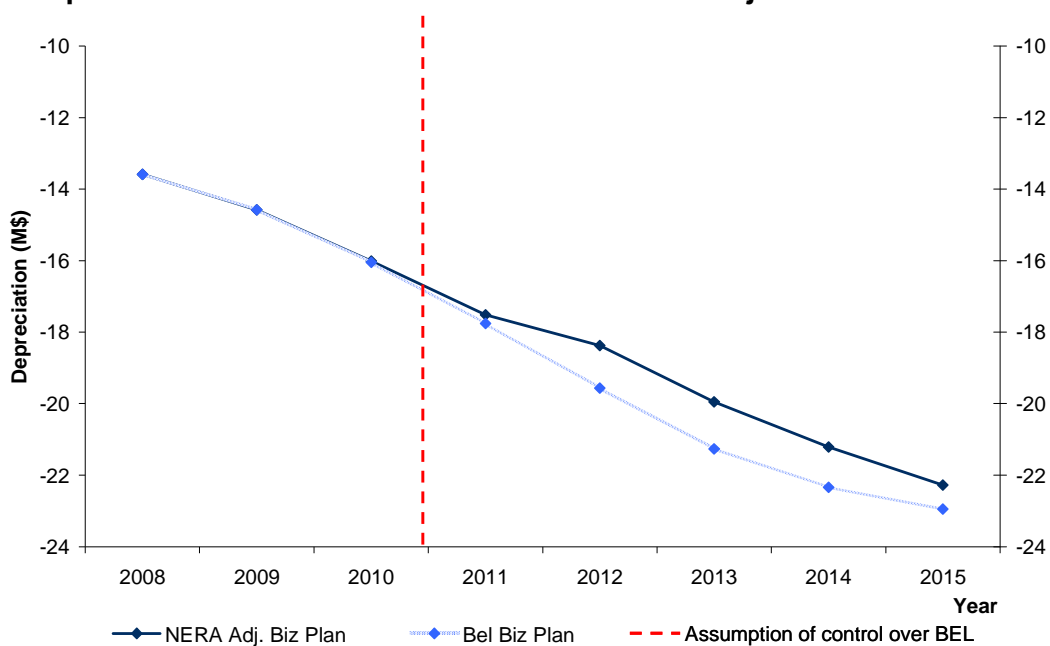
Figure 7.1
Capex Forecast: BEL Biz Plan VS. NERA Adjusted Business Plan



Source: NERA analysis; BEL's 2010 Annual report, BEL's Monthly Financial Statement (Jun-2011); BEL's 2011-2015 Business Plan

Figure 7.2 summarizes the depreciation under the two scenarios. The NERA Adjusted Business plan predicts slightly lower depreciation as it assumes lower capex and hence lower total depreciable assets.

Figure 7.2
Depreciation Forecast: BEL Biz Plan VS. NERA Adjusted Business Plan



Source: NERA analysis; BEL’s 2010 Annual report, BEL’s Monthly Financial Statement (Jun-2011); BEL’s 2011-2015 Business Plan

7.4. Taxes

Revenues are subject to a business tax. Revenues generated by BEL are taxed and are forecast to be taxed at 6.5% as of Valuation Date.

On April 1, 2010 the corporate tax rate increased from 1.75% of gross revenues to 6.5% of gross revenues. The difference (4.75%) was deferred to be recovered from customers in the next regulatory period. As all other pass through costs the tax increase is profit neutral as the additional tax is fully recovered from customers.

The regulated revenues and the tax on them are determined simultaneously¹³. To overcome the simultaneity we have to solve for the tax rate using the following equation:

$$Tax = \frac{t}{1-t} \cdot (CWP + opex + Depreciation + TAR + RSA)$$

Where:

- t is the corporate tax rate
- CWP is the Cost of wholesale power

¹³ If the tax on regulated revenues increases the revenues also have to increase as the higher tax has to be recovered from the customers, but increased revenues lead to higher tax, etc...

- Opex are the operating expenditures
- TAR is the Return earned by the licensee from tariffs levied on customers in year
- RSA are changes in the rate stabilization account

The tax rate on non-regulated activities is *not* passed onto customers and is calculated as a corresponding fraction (1.75% prior to 1 April 2010 and 6.5% after 1 April 2010) of non-regulated revenues.

7.5. Working Capital

We model individual components that constitute the working capital. We assume that the post-financial crisis and subsequent slow global recovery have not impacted the dynamics of the balance sheet items that constitute the working capital.

We model the Account receivable, Inventories, Prepayments, Customer deposits, and the Accounts payable and Accruals, as days payable as a fraction of revenues or opex. Our modelling approach reflects both the original forecast dynamics of the items and the recession.

Table 7.4 summarizes the balance sheet items that constitute the working capital. We predict that the working capital will stay broadly stable from 2011 onwards (the changes are predicted to be close to zero from 2013 to 2015).

Table 7.4
Capex and Depreciation Forecast (BZ \$M)

		2010	2011	2012	2013	2014	2015
Accounts receivable	M\$	19.0	15.8	16.3	17.2	18.2	18.9
<i>Accounts receivable - change</i>	M\$	2.0	-3.2	0.5	0.9	1.0	0.7
Inventories	M\$	6.2	5.5	4.8	4.9	5.0	5.0
<i>Inventories - change</i>	M\$	-0.3	-0.7	-0.6	0.1	0.1	0.1
Prepayments	M\$	1.0	1.1	1.1	1.1	1.1	1.1
<i>Prepayments - change</i>	M\$	-0.7	0.1	0.0	0.0	0.0	0.0
Customer deposits	M\$	7.1	6.7	6.6	6.7	7.0	7.0
<i>Customer deposits - change</i>	M\$	0.1	-0.4	-0.1	0.2	0.2	0.1
Accounts payable and accruals	M\$	24.7	18.5	16.6	17.4	18.4	19.0
<i>Accounts payable and accruals - change</i>	M\$	-10.0	-6.2	-1.9	0.8	1.0	0.6
Corporate tax payable	M\$	0.8	0.7	0.7	0.7	0.8	0.8
<i>Corporate tax payable - change</i>	M\$	0.6	-0.1	0.0	0.0	0.0	0.0
Working capital	M\$	-6.4	-3.4	-1.7	-1.7	-1.8	-1.8
<i>Changes in working capital</i>	M\$	10.4	2.9	1.8	0.0	-0.1	0.0

Source: BEL Business Plan 2011-2015, BEL 2010 Annual Report, BEL Jun-2011 Monthly Financial Statement and NERA analysis;

7.6. Gas Turbine and Diesel Generation Depreciation Recovery

It is our understanding that the depreciation of newly installed gas turbines (GT) and diesel generation facilities are not passed onto customers. Since the BEL Business Plan did not predict any investment into these facilities their depreciation should remain unchanged by the

post-financial crisis recession. We use the Original BEL Business Plan forecast for the GT and diesel generation depreciation.

7.7. Summary

Table 7.5 sets out the calculation of free cash flows over the 2010/2011 period when we use more accurate data than the BEL Business Plan and over the 2012/2015 forecast period. We predict a cash flow recovery from 2013 onwards once the economic recovery gets underway.

Table 7.5
Free Cash Flow Calculation for NERA Adjusted Business Plan (BZ \$M)

	Unit	2010	2011	2012	2013	2014	2015
Revenues	M\$	191	190	197	208	220	229
Refund (PUC) correction	M\$	0	0	27	0	0	0
Power cost	M\$	-133	-133	-119	-125	-134	-139
Contribution	M\$	58	58	105	83	87	89
Other revenue	M\$	6	6	7	7	7	7
Opex	M\$	-29	-26	-22	-23	-24	-24
Costs to fund RSA	M\$	-6	-8	-6	-4	-2	-1
EBITDA	M\$	34	38	89	66	70	72
Tax	M\$	-3	-3	-12	-13	-14	-14
Changes in RSA	M\$	24	11	-35	-11	-13	-15
Changes in WC	M\$	-10	-3	-2	0	0	0
Proceeds from Disposal	M\$	0	0	0	0	0	0
Cash Flow from Operations	M\$	40	35	34	39	41	42
Capex	M\$	-44	-37	-41	-24	-24	-34
Cash Flow to the Firm	M\$	-5	-2	-7	15	17	8

Source: NERA analysis

8. Discount Factor

WACC measures company’s business risk and is used to discount its cash flows to calculate their present value. We first calculate BEL’s weighted average cost of capital (WACC), then compare it with the Public Utilities Commission’s (PUC) WACC and allowed rate of return estimates and finally propose a consensus WACC estimate.

Our WACC calculation takes into account information up to the Valuation Date. Data after this point in time is not reflected in NERA’s WACC calculation. This approach is consistent with general principles of valuation theory, where all parameters are based as of information date of the valuation.

Table 8.1 shows the nominal WACC for BEL as of 20 June 2011. Our point estimate of the BEL’s WACC is 12.2%.

Table 8.1
Weighted Average Cost of Capital for BEL

Parameter	Jun-2011
Nominal BZ\$ Risk Free Rate	10.5%
Equity Risk Premium	5.9%
Asset Beta (Electricity Utilities)	0.4
Gearing	39.9%
Equity Beta	0.67
Nominal BZ\$ Cost of Equity	14.4%
Nominal BZ\$ Cost of Debt	8.9%
Nominal BZ\$ WACC	12.2%

Source: NERA analysis,

- The Nominal Risk Free Rate is calculated as a three month average at the Valuation date of the yield to maturity of Belize government bond. The bond is denominated in US\$. To calculate the yield in BZ\$ we adjust the yield for the expected inflation difference between the US and Belize.
- Equity Risk Premium (ERP) is the world long run average ERP, see DMS(2011)¹⁴. We use the world ERP, as the financial markets have become internationalized and expected risk premiums equalized.
- We set asset beta equal to 0.4, which is the consensus estimate for regulated electricity utilities.
- Gearing is the book value gearing based on BEL (2010)¹⁵

¹⁴ Dimson, Marsh, Staunton (2011): Credit Suisse investment Returns Sourcebook 2011

¹⁵ BEL(2010): Annual Report p.17

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- Nominal cost of debt is calculated as the weighted average of interest rates on BEL’s long term debt and debentures issues as reported in BEL(2010)¹⁶

The PUC does not provide a recent WACC estimate for BEL. PUC (2008)¹⁷ states: “...*the Commission was guided by ... BEL’s Weighted Average Cost of Capital (WACC) of below 10%*”. The PUC then goes on and sets the rate of return (ROR) for BEL to 10%. This rate is inappropriate to discount future BEL’s cash flows as it does not reflect the post-financial crisis recession and subsequent slow recovery. A rational outside investor would use the WACC as of the valuation date to discount the future cash flows.

We choose the 12.2% WACC as our base case estimate, because it best reflects the post-financial crisis recession and subsequent slow recovery and would be used by the rational investor to value the company.

¹⁶ BEL(2010): Annual Report

¹⁷ Public Utilities Commission (2008): Final Decision for the Annual Review Proceedings 2008 for Belize Electricity Limited p. 32

9. Continuing Value

After the explicit forecast period for the years 2011-2015, we value BEL’s continuing operations using the following standard formula:¹⁸

$$\text{Continuing Value}_{2015} = \frac{\text{NOPLAT}_{2016} \left(1 - \frac{g}{\text{ROIC}} \right)}{\text{WACC} - g},$$

where

- ROIC is the return on incremental invested capital;
- g is the (nominal) NOPLAT¹⁹ growth rate into perpetuity; and
- WACC is the average weighted cost of capital, i.e. the risk reflective discount rate.

We set ROIC equal to the WACC. This means in calculating the continuing value (CV), we forecast that BEL earns its cost of capital on incremental invested capital and does not earn exceptional profits, which may arise e.g. due to a monopoly position. This assumption is consistent with general economic theory, which predicts that in the long-run supernormal profits are likely competed away through new entry (or threat thereof).²⁰

We assume a constant growth rate, g , for revenues and NOPLAT in calculating the continuing value.

We calculate NOPLAT₂₀₁₆ by first deriving average EBIT₂₀₁₃₋₁₅ over the 2013 -15 period. The average EBIT₂₀₁₃₋₁₅ is estimate of the EBIT₂₀₁₆, we than subtract from it the forecast taxes for 2016:

$$(I) \quad \text{EBIT}_{2016} = \text{Rev}_{2015} \cdot (1 + g) \cdot \text{Avg. EBIT margin}_{(2013-15)}$$

$$(II) \quad \text{NOPLAT}_{2016} = \text{EBIT}_{2016} - (\text{Rev}_{2015} \cdot (1 + g) \cdot \text{effective Tax Rate})$$

We exclude the 2012 observation from our calculation of the Average EBIT, because the 2012 figure is inflated by the RSA refund we assume in scenario 1 (see Section 0 for details).

Table 9.1 set out the calculation and shows the continuing value of operations in 2014 for the NERA Adjusted Business Plan and BEL Business Plan. We set the growth rate, g , equal to

¹⁸ For example, see Koller *et al.* “Valuation: Measuring and Managing the Value of Companies.” 4th Edition. Chapter 5, for the derivation of this CV formula.

¹⁹ NOPLAT stands for “Net Operating Profit Less Adjusted Taxes”.

²⁰ For example, the theory of monopolistic competition predicts that many competing producers sell products that are differentiated from one another (that is, the products are substitutes, but, with differences such as branding, are not exactly alike). In monopolistic competition firms can behave like monopolies in the *short-run*, including using market power to generate supernormal profit. However, in the long-run, other firms enter the market and the benefits of differentiation decrease with competition; the market becomes more like perfect competition where firms cannot gain economic profit.

4.0%. This is consistent with the assumed sales growth over the forecast period 2012-2015 under the NERA Adjusted Business Plan and BEL Business Plan.

Table 9.1
Calculation of Continuing Value in 2014 (BZ '000)

	Unit	NERA Adj. Biz Plan	BEL Biz Plan
Revenues (in 2015)	000\$	228,501	245,906
Growth rate (g)	%	4%	4%
Revenues (in 2016)	000\$	237,641	255,743
Average EBITA margin (2012-2015)	%	22%	26%
EBITA (in 2016)	000\$	52,387	65,666
Effective tax rate	%	6.5%	6.5%
Taxes	000\$	-15,447	-16,623
NOPLAT (2015)	000\$	36,941	49,042
Continuing value (in 2015)	000\$	302,793	401,987

Source: NERA analysis

10. Fair Market Valuation

In Section 7 we describe our approach of forecasting free cash flows, which forms the basis for our valuation of BEL’s operations. The present value of free cash flows plus the continuing value is equal to the fair market value of the company. We first calculate the FMV of the company at the beginning of 2011 (see Equation 2).

$$\text{Equation 2} \quad FMV_{2011} = NPV(\text{cash flows}) + NPV(\text{Continuing value}_{2015})$$

Table 10.1 shows the FMV of BEL at the beginning of 2011. We estimate that the valuation based on BEL’s Business Plan overvalues the company by 44%. This is because the BEL Business Plan does not take into account the post-financial crisis recession and subsequent slow recovery and uses unrealistically low WACC.

Table 10.1
FMV of BEL at the Beginning of 2011 (BZ\$ ‘000)

	Unit	Value 2011
NERA Adj. Biz Plan	000\$	189,144
BEL Biz Plan	000\$	273,164
Difference	%	44%

Source: NERA analysis

We then use standard adjustment technique²¹ to adjust the FMV_{2011} for the valuation date 20 June 2011 (see Equation 3). For more details on the adjustment see Section 3.4 of this report.

$$\text{Equation 3} \quad \text{Adjustment} = \left(\frac{1}{1 + WACC} \right)^{\frac{153}{365}}$$

Table 10.2
FMV of BEL at the Valuation Date 2011 (BZ\$ ‘000)

	Unit	Value 2011
NERA Adj. Biz Plan	000\$	198,494
BEL Biz Plan	000\$	286,668
Difference	%	44%

Source: NERA analysis

10.1. Summary

We have calculated the fair market value (FMV) of Belize Electricity Limited (BEL) on the 20 June 2011. Our analysis shows the following:

- BEL’s original Business Plan does not fully account for the post-financial crisis recession during 2010/2011. Therefore the valuation based on BEL’s original Business Plan overestimates BEL’s FMV as of Valuation Date 20 June 2011.

²¹ For example, see Koller *et al.* “Valuation: Measuring and Managing the Value of Companies.” 4th Edition.

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- The NERA Adjusted Business Plan takes into account the impact of the post-financial crisis recession during the years 2010/11 and best reflects the value of the company as of the Valuation Date. We estimate the FMV at \$BZ 198.5 million.

11. Equity Valuation

In Section 7 we described our approach of forecasting free cash flows, which form the basis for our valuation of BEL’s operations. The present value of free cash flows (plus the continuing value) is equal to the FMV as discussed in section 10. The table below sets out our approach in calculating the equity value from the FMV. This is consistent with general accepted valuation principles.

Table 11.1
Derivation of Enterprise and Equity Value

Operation	Line Item
	Fair market value
Plus	Excess Mkt Securities
=	Enterprise Value
Minus	Debt
Minus	Tax Adjustment
=	Equity Value

11.1. Results of Enterprise and Equity Valuation

The cash and short term investments as of Valuation Date stood at \$4.7 million, which is necessary to run the day to day operations of BEL. Hence, we set the enterprise value equal to the fair market value. This approach is correct under the assumption that the excess cash and marketable securities are nil.

To arrive at the equity value of BEL, we subtract total long term liabilities of \$91.877 million from BEL’s enterprise value. This amount is disclosed in BEL’s consolidated financial statements (30th June 2009). The long term liabilities consist of long term debt and debentures.

There were four major lenders who had lent BEL more than \$1 million in long term debt as of December 2010: The Government of Belize; (\$12,3 million); RBTT Merchant Bank Limited (\$1,7 million); The Bank of Nova Scotia (\$12,7 million); and Scotiabank & Trust (Cayman) Limited (\$4.0 million).

The debentures are long term liabilities that are callable by the company and repayable at the option of the debenture holder. BEL has issued four series up to date with total face value of \$69.3 million. Series 1 to 3 are callable by BEL and repayable at the option of the debenture holder; series 4 will become callable by BEL and repayable at the option of the holder on or after September 30, 2014.

Table 11.2 shows our valuation results of BEL’s enterprise and equity value for each of our 3 scenarios. Appendix B shows the detailed cash flow calculation which underlies each scenario. We also calculate the value per share based on 69,023,009 shares²² outstanding.

Table 11.2
FMV of BEL’s Enterprise and Equity Value (\$ ‘000)

	Unit	NERA Base	NERA (2)	BEL
FMV (Jun-2011)	000\$	198,494	173,308	265,326
Excess Mkt Securities	000\$	0	0	0
Enterprise Value	000\$	198,494	173,308	265,326
LT Liabilities (Jun-2011)	000\$	-91,877	-91,877	-91,877
<i>LT Debt</i>	000\$	-22,565	-22,565	-22,565
<i>Debentures</i>	000\$	-69,311	-69,311	-69,311
Equity Value	000\$	106,618	81,431	173,449
Number of Shares	000	69,023	69,023	69,023
Value per Share	\$	1.54	1.18	2.51

Source: NERA analysis

Our base case assessment of BEL’s fair market value per share (based on 69.023 million shares outstanding) is \$1.54. The Base case valuation assumes that the PUC credits \$25.601 million to the RSA account for rate under-recovery from 2009 to 2011.

If the PUC concludes that the electricity rates between 2009 and 2011 were adequate NERA’s second scenario will apply. BEL’s equity value is \$1.18 per share in the second scenario.

Valuation based on BEL’s Original Business Plan would value the company at \$2.51 per share. As was discussed in Sections 4 to 7 BEL’s Original Business Plan does not fully reflect the post-financial crisis recession and ensuing slow recovery and hence does not provide a reliable basis for market valuation. We show in Section 10 that the FMV based on BEL’s original business plan overvalues the company, valuing it at a 19%-41% premium. The equity valuation based on BEL’s Business Plan is based on unrealistic assumptions and grossly overvalues the company.

11.2. Summary

Based on the above analysis, our assessment of BEL’s fair market value per share (based on 69.023 million shares outstanding) is \$1.54. This fair value reflects the impact of the financial crisis and recession on BEL’s business.

The Base case valuation assumes that the PUC credits \$25.601 million to the RSA account for rate under-recovery from 2009 to 2011. If the PUC concludes that the electricity rates between 2009 and 2011 were adequate NERA’s second scenario will apply. BEL’s equity value is \$1.18 per share in the second scenario.

²² BEL (2010): Annual report p.33; BEL (2011): Management Report for Month Ended June 30, 2011

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The valuation based on BEL's Business Plan grossly overvalues the company and should not be taken into account.

Appendix A. NERA Adjusted Business Plan 2011-15

Table A.1 sets out the NERA Adjusted Business Plan for 2011-2015. The grey cells are NERA predictions.

Table A.1
NERA Adjusted Business Plan 2011-2015

	Unit	2010	2011	2012	2013	2014	2015
NERA Adjusted Biz Plan							
P&L and Cash Flow Inputs							
Revenues	000\$	190,526	190,449	196,952	207,800	220,398	228,594
Power cost (CWP)	000\$	(132,985)	(132,931)	(119,126)	(124,994)	(133,718)	(139,124)
Other revenue	000\$	5,722	6,391	6,521	6,612	6,683	6,755
Opex	000\$	(29,374)	(26,315)	(22,192)	(22,857)	(23,543)	(24,249)
Interest	000\$	(11,934)	(12,448)	(12,089)	(12,851)	(12,437)	(11,679)
Tax	000\$	(2,778)	(3,066)	(11,963)	(12,635)	(13,419)	(13,915)
Depreciation	000\$	(16,014)	(17,520)	(18,370)	(19,949)	(21,210)	(22,273)
Capex	000\$	(44,372)	(37,133)	(41,071)	(23,961)	(24,167)	(33,575)
Balance Sheet Items							
Accounts receivable	000\$	19,037	15,788	16,321	17,217	18,258	18,935
Inventories	000\$	6,162	5,474	4,833	4,891	4,950	5,012
Prepayments	000\$	990	1,106	1,074	1,090	1,111	1,108
Customer deposits	000\$	7,125	6,678	6,578	6,764	6,991	7,065
Accounts payable and accruals	000\$	24,664	18,471	16,574	17,358	18,353	18,954
Corporate tax payable	000\$	774	659	702	730	759	789
Amortisation of capital contributions	000\$	814	881	948	1,015	1,082	1,148
Property, plant and equipment (net)	000\$	444,684	475,358	475,678	479,690	482,647	493,950
Proceeds from Disposal	000\$	-	-	-	-	-	-
NERA Changes in Working capital							
Current Assets	000\$	26,189	22,368	22,229	23,199	24,320	25,055
Current Liabilities	000\$	32,563	25,808	23,854	24,852	26,103	26,808
WC	000\$	(6,375)	(3,440)	(1,625)	(1,654)	(1,782)	(1,753)
Changes in WC	000\$	10,355	2,935	1,815	(29)	(128)	29
Adjustment to depreciation							
GT recovery via capacity charge	000\$	1,739	2,321	1,739	1,739	1,739	1,739
Other diesel capacity recovery	000\$	949	1,074	944	944	944	944
Total GT and diesel adjustment to deprecia	000\$	2,688	3,395	2,683	2,683	2,683	2,683
Capital contribution	000\$	814	881	948	1,015	1,082	1,148

Appendix B. Detailed Valuation Results

B.1. Scenario: NERA Adjusted Business Plan

The table below sets out our valuation of BEL's operations under the 'NERA Adjusted Business Plan' scenario.

Table B.1
Value of BEL's Operations under the NERA Adjusted Business Plan (BZ\$ '000)

	Unit	2011	2012	2013	2014	2015
Cash Flow Analysis						
Revenues	000\$	190,449	196,869	207,714	220,308	228,501
Refund (PUC) correction	000\$	-	26,984	-	-	-
Power cost	000\$	(132,931)	(119,126)	(124,994)	(133,718)	(139,124)
Contribution	000\$	57,518	104,726	82,720	86,590	89,377
Other revenue	000\$	6,391	6,521	6,612	6,683	6,755
Opex	000\$	(26,315)	(22,192)	(22,857)	(23,543)	(24,249)
EBITDA	000\$	37,594	89,056	66,475	69,730	71,883
Tax	000\$	(3,066)	(12,106)	(12,779)	(13,564)	(14,061)
Costs to fund RSA	000\$	(7,670)	(6,348)	(3,766)	(2,424)	(849)
Changes in RSA	000\$	11,377	(34,728)	(10,890)	(12,818)	(15,003)
Changes in WC	000\$	(2,935)	(1,810)	29	129	(29)
Proceeds from Disposal	000\$	-	-	-	-	-
Cash Flow from Operations	000\$	35,300	34,064	39,070	41,053	41,941
Capex	000\$	(37,133)	(41,071)	(23,961)	(24,167)	(33,575)
Cash Flow to the Firm	000\$	(1,832)	(7,008)	15,109	16,886	8,366
IOPLAT Calculation						
Revenues 2016	000\$	237,641				
EBITDA	000\$	37,594	89,056	66,475	69,730	71,883
Depreciation	000\$	(17,520)	(18,370)	(19,949)	(21,210)	(22,273)
EBIT	000\$	20,074	70,686	46,527	48,520	49,610
EBIT margin	%	11%	36%	22%	22%	22%
EBIT margin (average over forecast)	%	22%				
EBIT 2016 (based on average margin)	000\$	52,387				
Tax (in 2016)	000\$	(15,447)				
NOPLAT (2016)	000\$	36,941				
Terminal value calculation						
NOPLAT (2016)	000\$	36,941				
Terminal Value in 2015	000\$	302,793				
Company valuation						
Cash Flow to the Firm	000\$	18,857	(1,832)	(7,008)	15,109	16,886
Terminal Value	000\$	170,287	-	-	-	302,793
Terminal Value	000\$	189,144				
Mid-year adjustment factor		0.95				
Value in June 2011		198,494				

Appendix C. Report Qualifications and Assumptions

This report is for the exclusive use of our client to whom it is addressed and its professional advisers. It does not represent investment advice or provide an opinion regarding the fairness of any transaction to any and all parties. There are no third party beneficiaries with respect to this report, and we accept no liability to any third party.

This report is intended to be read and used as a whole and not in parts. Separation or alteration of any section or page from the main body of this report invalidates this report.

This report is not intended for general circulation or publication, nor is it to be used, reproduced or distributed for any purpose other than those that may be set forth herein without the prior written permission of NERA. Neither all nor any part of the contents of this report, any opinions expressed herein, or the firm with which this report is connected, shall be disseminated to the public through advertising media, public relations, news media, sales media, mail, direct transmittal, or any other public means of communications, without the prior written consent of NERA.

Information furnished by third parties, upon which this report is based, is believed to be reliable but has not been verified. No warranty is given as to the accuracy of such information. Public information and industry and statistical data, including without limitation information and data with respect to Belize Electricity Limited, are from sources we deem to be reliable and accounts have been audited; however, we make no representation as to the accuracy or completeness of such information and have accepted the information without further verification.

In rendering this report, we have also relied upon and assumed the accuracy of data and information provided to us by Belize Electricity Limited, such as audited financial statements and past Business Plans of Belize Electricity Limited for the years 2006 through to 2010.

No responsibility is taken for changes in market conditions or laws or regulations and no obligation is assumed to revise this report to reflect changes, events or conditions, which occur subsequent to the date hereof.

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Appendix D. **Statement of Acknowledgement of Solutions
Economics LLC and Global Financial Analytics
LLC's Valuation Report**

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05 January 2012

Statement of Acknowledgement of Solutions Economics LLC and Global Financial Analytics LLC's Valuation Report

Subsequent to our December 2011 valuation report entitled "Fair Market Value Assessment of Belize Electricity Limited", we have reviewed the Report on Valuation prepared by Solutions Economics LLC and Global Financial Analytics LLC (15 November 2011) entitled "Opinion on Valuation of Fortis' Investment in Belize Electricity Limited" on behalf of Fortis Cayman Inc., Maritime Electric Cayman Inc., Newfoundland Energy Cayman Inc. and Fortis Energy (International) Belize Inc.

Following our review of the Report on Valuation, we see no reason to change our fair market valuation of Belize Electricity Limited and stand by our earlier valuation dated December, 2011.

Signed:



Dr Richard Hern
Director